AMENDMENTS TO THE CLAIMS

This claim set replaces all previous versions of the claims. Added language is underscored; deletions are shown using strikethrough or double bracketing.

1. (Currently Amended) A fast scanning stage for a scanning probe microscope, said scanning probe microscope including a probe, said fast scanning stage comprising[[,]] at least one fixed support[[,]] and a sample stage having at least one axis of translation, said sample stage being affixed to said at least one fixed support by means for causing displacement of said sample stage relative to said probe.

2. (Currently Amended) A fast scanning stage ~~as claimed in claim 1~~ for a scanning probe microscope, said scanning probe microscope including a probe, said fast scanning stage comprising at least one fixed support and a sample stage having at least one axis of translation, said sample stage being affixed to said at least one fixed support by means for causing displacement of said sample stage relative to said probe, and in which said means for causing displacement of said sample comprise at least one actuator element supporting said stage and a sine waveform generator for actuating said at least one actuator element.

3. (Currently Amended) A fast scanning stage as claimed in claim 2 in which said means for causing displacement of said sample stage comprise four actuator elements supporting said sample stage.

4. (Currently Amended) A fast scanning stage for a scanning probe microscope, said scanning probe microscope including a probe, said fast scanning stage comprising at least one fixed support and a sample stage having at least one axis of translation, said sample stage being affixed to said at least one fixed support by at least one actuator element, a sine waveform generator for actuating said at least one actuator element, in which said sample stage is displaced by said at least one actuator element being driven at the frequency of resonant vibration corresponding to translation of said sample stage with respect to said probe.

5. (Currently Amended) A fast scanning stage as claimed in claim 3 in which said sample stage has a square or rectangular configuration and each corner of said sample stage is supported by one of said actuator elements.

6. (Original) A fast scanning stage as claimed in claim 5 in which said actuator elements form a parallelogram scanning element.

7. (Original) A fast scanning stage as claimed in claim 6 in which said actuator elements are connected electrically in parallel.

8. (Original) A fast scanning stage as claimed in claim 2 in which said at least one actuator element comprises a stack bending element.

9. (Original) A fast-axis scanning stage as claimed in claim 2 in which said at least one actuator element comprises a PZT bimorph.

10. (Original) A fast-axis scanning stage as claimed in claim 3 in which said at least one actuator element comprises a PZT bimorph.

11. (Currently Amended) A fast-axis scanning stage as claimed in claim 1 in which said sample stage is comprised of a material selected from the group consisting of ceramics, heat resistant polymers, and anodized aluminum.

12. (Currently Amended) A scanning probe microscope including a probe and a fast scanning stage, said fast scanning stage comprising at least one fixed support, and a sample stage having at least one axis of translation, said sample stage being affixed to said at least one fixed support by at least one actuator element supporting said sample stage to cause displacement of said sample stage relative to said probe.

13. (Currently Amended) A method of operating a fast scanning stage for a scanning probe microscope, said scanning probe microscope including a probe, comprising, providing a sample stage having a sample thereon and causing displacement of said sample on said

sample stage relative to said probe by actuating at least one actuator element to drive said sample stage at ~~its~~ the resonant frequency of said sample stage using a sine waveform generator.

14. Canceled.

15. (Currently Amended) A method as claimed in claim 13 in which the resonant frequency of said sample stage is about $1/100^{th}$ that of the resonant frequency of said probe.